

- 7 -

### **REMARKS**

Upon entry of this amendment, claims 1-20 are pending. By this amendment, claims 1, 8 and 18 are amended. Applicants submit that the above amendments do not add new matter to the application and are fully supported by the specification. Support for the amendments may be found at least in Figures 3-4 and at pages 6-8, of the specification. Applicants respectfully request reconsideration and timely withdrawal of the pending rejections for the reasons discussed below.

#### ***35 U.S.C. § 102 Rejection***

Claims 1, 2, 4, 6, 8, 9, and 12-17 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U. S. Patent No. 6,313,921 issued to Kadowaki, *et al.* (“Kadowaki”). Additionally, claims 11-20 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,556,963 issued to Tetzlaff (“Tetzlaff”).

Applicants appreciate the Examiner’s detailed responses to Applicants’ previous arguments, and respectfully offer the following comments for the Examiner’s consideration.

#### ***Claims 1, 2, 4, 6, 8, 9, and 12-17***

As amended, claim 1 recites, in part,

...actively selecting, by analysis of the at least one profile element, a personalization engine from a plurality of personalization engines by the arbiter, the arbiter refining and altering a selection based on a number and type of the at least one profile element;.....

- 8 -

As amended, claim 8 recites, in part,

....an arbiter for accepting and analyzing a request object,  
the arbiter refining and altering a selection based on a number and  
type of at least one profile element contained in the request  
object;.....

In the Office Action dated April 8, 2004, the Examiner argued that:

- a). Using a “user ID” referenced in Kadowaki, Col. 15, lines 45-53, could be interpreted to “indicate a personalizing server from which personalization information is to be acquired.” The Examiner also opined that Kadowaki, at Col. 18, line 62 – Column 19, line 3, allegedly teaches that the personalization server extracts “personalizing information” based on the “user ID information and the like.”
- b). It is inherent in Kadowaki that personalizing information is stored in a database, because Kadowaki allegedly teaches at Column 18, line 62 – Column 19, line 3, that the personalization server whose network address is acquired by the user ID information extracts “personalization information managed by itself and stored for an apparatus of the user”.....
- c). The personalization information taught by Kadowaki at Column 19, lines 3-10, contains “a cumulative number of printed sheets of the current user, an upper-limit number of printed sheets of the current user, an available function list of the current user, font data of the current user, cover sheet image data of the current user, and form image data of the current user.” All these elements, according to the Examiner, can be allegedly interpreted as being profile elements associated with the request object.
- d) and f) Language argued by Applicants did not appear in claims 1, 2, 4, 6, or 8.
- e) Kadowaki, at Column 15, lines 45-53, teaches using “user ID information” to “indicate a personalizing server from which personalization information is to be acquired.” Additionally, Kadowaki, at Column 18, lines 39-46, allegedly teaches that the

printer controller acquires the network address of the personalizing server from the user ID information described in a print job and sends the user ID information to the selected personalizing server. Thus, according to the Examiner, the user ID information taught by Kadowaki can allegedly be interpreted as request information because it specifies the user who requested the personalizing.

Applicants however, respectfully offer the following in traverse of each of the Examiner's stated positions.

Regarding (a) and (b), Kadowaki teaches an apparatus for forming images. The apparatus, in contrast to the present invention, uses a key (user ID) corresponding to a user. This key, or user ID, identifies particular, user-specific, image forming information to be used in forming an image for the user. Consequently, the key is simply used to designate acquisition of pre-existing setup information corresponding to the key. As such, Kadowaki does not first select a personalization engine and then use that personalization engine to access a database to further select personalized information, as in the claimed invention.

The arbiter of the present invention differs from the printer controller of Kadowaki in that the arbiter actively selects a personalization engine according to various methods. The printer controller of Kadowaki does not. It simply routes the user ID provided by the print job to the network address of a particular personalization server that was contained in the user ID. But, in actively selecting a personalization engine, the arbiter of the present invention may use standard object-oriented analysis. It may also use an expert system for selection that is rule-based, model-based, or knowledge-based. The selection made by the arbiter is based on information provided by the request object, a profile database, or a combination thereof. Based on this active analysis,

the arbiter then chooses a personalization engine which is best adapted to making the best choice of which personalized content object to be retrieved from the content database.

Once chosen, by the arbiter, the personalization engine performs a second selection process. First, it receives and analyzes the request object. Then, based on the outcome of the analysis it identifies a personal content object to be retrieved from the content database. Because various types of personalization engines are available for the arbiter to select, the actual processing steps of the second selection process are determined by the personalization engine choice. For example, the personalization engine may include a business-rules engine, a collaborative-filtering engine, or a predictive-modeling engine.

The user ID of Kadowaki, by contrast, contains the *pre-selected* network address of a particular personalization server. That the personalization server is uniquely and singularly pre-determined, without possibility of the printer controller actively selecting a different personalization server, is further exemplified by Kadowaki's teachings at Column 15, lines 41-44, that

a certain user acquires personalizing information from a personalizing server 3-1, and another user acquires personalizing information from a personalizing server 3-2.

In marked contrast to the arbiter of the claimed invention, the printer controller taught by Kadowaki performs a passive role rather than an active one, for it merely routes the user ID and other information to a personalization server 3-1, whose particular, pre-specified network address exactly matches the network address contained in the user ID. Thus, it cannot be considered or interpreted as being the same or similar to the arbiter claimed by Applicants; nor

- 11 -

can it be considered or interpreted as performing the same or similar functions as the arbiter claimed by Applicants.

The Examiner is of the opinion, though, that the Kadowaki printer controller is an arbiter which directs personalization information to a personalization server. This is not accurate. As explained above, the printer controller of Kadowaki does not engage in a selection process. Rather, it simply sends apparatus ID information to a pre-specified personalization server. The apparatus ID contains a number that identifies a particular type of printer to be used in the image formation process. Identifying a particular machine by ID information, however, simply relies on linking a particular machine to a particular ID number. This teaching is contrary to the present invention because it requires no analysis and selection based on at least one profile element as claimed.

In contrast to Kadowaki, the present invention actively tailors the content of information delivered over the Internet to correspond to a particular requesting user. This is accomplished, in one embodiment, upon receipt of a request object, by passing the request object to an arbiter that is capable of refining or altering its selection based on a number and type of at least one profile element contained in the request object. In a manner very different from Kadowaki, the arbiter actively analyzes the at least one profile element and actively selects (not passively routes, as taught by Kadowaki), from among a plurality of personalization servers, the one that is expected to provide the “best performance given the circumstances of the user or the appropriate application program.” Specification, page 8, paragraph 1.

Regarding (c) and (e), the printer and page-related attributes taught by Kadowaki at Column 19, lines 3-10, cannot be interpreted to anticipate Applicants’ claimed profile elements;

nor can the user ID be interpreted to anticipate Applicants' claimed request object, as suggested by the Examiner. Kadowaki teaches:

- 1) receiving a print job containing, *inter alia*, a user ID,
- 2) routing the user ID containing the network address of a particular personalization server to a printer controller,
- 3) routing the user ID, apparatus ID, and password to the specified personalization server,
- 4) retrieving personalization information containing printer and page-related attributes from the server, and
- 5) storing this personalization information in storage areas associated with the printer controller.

In Kadowaki, the attributes are not accessed until after the user ID is sent to the designated personalization server.

The present invention, by comparison, discloses:

- 1) receiving a request object,
- 2) associating one or more profile elements with the request object,
- 3) routing the request object and associated profile element(s) to an arbiter,
- 4) actively analyzing the profile element(s), and
- 5) actively selecting a personalization server, from among a plurality of personalization servers, the one that is expected to provide the "best performance given the circumstances of the user or the appropriate application program.

Clearly, the attributes taught by Kadowaki are not associated with the print job before it is sent to the printer controller. For this reason, neither the print job nor the user ID of Kadowaki can be interpreted as anticipating the request object containing one or more profile elements as claimed by the present invention.

Regarding (d) and (e), claim 1 was amended to include the features disclosed in the Specification that were previously argued by Applicants.

Consequently, claims 1 and 8 are in allowable condition. Claims 2, 4, 6, 9, and 12-17 are allowable at least for the reasons discussed above with respect the independent claims 1 and 8, from which they respectively depend, as well as for their added features. Accordingly, Applicants respectfully request that the rejection of claims 1, 2, 4, 6, 8, 9, and 12-17 be withdrawn.

***Claims 18-20***

As amended, claim 18 recites, in part,

....an arbiter selecting a personalization engine by analysis of at least one profile element;....

In the Office Action, the Examiner argued that:

- (a) Tetzlaff allegedly teaches a method for tailoring information delivered to a user.
- (b) The food analyzer taught by Tetzlaff can allegedly be interpreted as an arbiter.
- (c) Tetzlaff allegedly teaches the food analyzer receiving a request from a user and sending “a personalized content object” to the user’s application program.

(d) Tetzlaff allegedly teaches the food analyzer receiving a “profile element” from a “profile database,” because in the Examiner’s words, “it is inherent that the search engines search databases.”

In traverse of each of the Examiner’s stated positions, however, Applicants respectfully offer the following comments.

Regarding (a) and (b), Tetzlaff discloses a software program (food analyzer) useable on a single computer. The food analyzer receives natural language inputs from a user, translates them, and responds with dynamic, personalized, state-sensitive feedback about the nutrients of the selected food choices in relation to the user’s personal nutritional objectives. According to Column 3, lines 31-67, a user of the food analyzer inputs and describes in natural language the elements of meal that she has eaten or that she plans to eat. These inputs are received by a stand-alone, general purpose computer system that contains and runs the food analyzer. The food analyzer then invokes a speech recognizer and corresponding speech model to recognize individual words in the input stream. Thereafter, the food analyzer invokes a fuzzy search module which compares the recognized individual words against a food model. Once a specified food is matched, its nutrient values are retrieved, and the resulting food descriptor is passed to a feedback generator, which analyzes components of the food descriptor against both a user model and a diet protocol. Because the user model contains personalized nutritional objectives and rule-based descriptors, the food analyzer is able to return an immediate, contextualized feedback to the user based on the user’s previously entered inputs.

Tetzlaff differs significantly from the claimed invention, however. For example, its food analyzer, unlike the arbiter of the claimed invention, does not select a personalization engine



- 15 -

based on the food analyzer's analysis of a profile element contained in the user's natural language request. As inputted, the user's natural language request contains only the words themselves, which are parsed and processed. No profile elements are associated with and/or contained within the user's natural language request before it reaches the food analyzer. Consequently, the food analyzer can only process the individual words that make up the request itself. It cannot and does not process the profile elements of the claimed invention that are associated with and contained in a request object before it is passed to an arbiter. For these reasons, Applicants respectfully submit that the food analyzer taught by Tetzlaff does not anticipate the arbiter of the claimed invention.

Regarding (d), the Examiner's statement does not appear to be correct. Although Tetzlaff discloses various types of databases generally, it specifically fails to disclose or teach the profile elements or profile database of the claimed invention, as shown in Applicants' FIG. 2A and described at page 5, paragraph 2 of Applicants' specification. As mentioned above, the profile elements are associated with each request object and have different numerical values for each request object. The profile elements are retrieved from a profile database and inserted in each request object before the request object reaches the arbiter. Clearly, nothing of this sort is taught or disclosed by Tetzlaff. Accordingly, Applicants respectfully submit that the mere assertion by the Examiner that "it is inherent that search engines search databases," without more, fails to anticipate the features of the claimed invention.

Regarding (c), the Examiner's statement, although correct, fails to take into account that claim 19 depends from claim 18, and thereby also includes all the novel features and limitations

- 16 -

of its parent. For this reason, claim 19 is allowable over Tetzlaff. The same reasoning may be applied with respect to the rejection of claim 20, which also depends from claim 18.

For the above reasons, claim 18 is in allowable condition. Claims 19 and 20 are allowable at least for the reasons discussed above with respect the independent claim 18, from which they respectively depend, as well as for their added features.

Accordingly, Applicants respectfully request that the rejection of claims 18-20 be withdrawn.

### ***35 U.S.C. § 103 Rejection***

Claims 3, 5, 10 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U. S. Patent No. 6,313,921 issued to Kadowaki, *et al.* (“Kadowaki”) in view of U. S. Patent No. 6,044,376 issued to Kurtzman, II, *et al.* (“Kurtzman, II”). Additionally, Claim 7 stands rejected under 35 U.S.C § 103(a) as being unpatentable over Kadowaki in view of U.S. Patent No 6,064,980 issued to Jacobi, et al., (“Jacobi”) in further view of U.S. Patent No. 6,536,963 issued to Tetzlaff (“Tetzlaff”). Applicants respectfully traverse these rejections.

Applicants note that a § 103 rejection requires the Examiner to first establish a prima facie case of obviousness: “The examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness.” M.P.E.P. § 2142. Additionally, the Court of Appeals for the Federal Circuit has set forth three elements which must be shown for prima facie obviousness:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or

motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

However, as discussed below, Applicants submit that the combinations of references suggested by the Examiner do not show all the features of the claimed invention.

First, the rejected claims depend from distinguishable independent claims 1 and 8. Accordingly, claims 3, 5, 10, and 11 will also be allowable for at least the reasons discussed with respect to independent claims 1 and 8, as well as for their added features.

Claim 1 recites, in part,

...actively selecting, by analysis of the at least one profile element, a personalization engine from a plurality of personalization engines by the arbiter, the arbiter for refining and altering a selection based on a number and type of the at least one profile element;....

As amended, claim 8 recites, in part,

....an arbiter for accepting and analyzing a request object, the arbiter for refining and altering a selection based on a number and type of at least one profile element contained in the request object;....

### ***Kadowaki and Kurtzman II***

The deficiencies of Kadowaki with respect to claims 1 and 8 have already been noted above. In summary, however, Applicants note that Kadowaki does not disclose an arbiter that actively selects a personalization engine based on the arbiter's analysis of profile elements.

Kadowaki does not further disclose an arbiter capable of refining and altering its analysis based

- 18 -

on a number and type of profile elements. Additionally, the Examiner aptly noted that “Kadowaki does not teach the method wherein the application program is a web browser.”

Adding Kurtzman II, however, does not cure the deficiencies of Kadowaki. The Examiner apparently realized this because he only cited Kurtzman II against dependent claims 3, 5, 10 and 11 for the general propositions that,

(a) it allegedly teaches a method wherein an application program is a web browser; and

(b) it allegedly teaches a method wherein a communications network is the Internet.

Regarding (a) and (b), Kurtzman II discloses a user profile technique that builds a user profile based on the content of files selected and viewed by a user over the Internet. As described in Kurtzman II at Column 2, lines 53-67 – Column 3, lines 1-67, a website server receives requests for advertisements and forwards these requests to an affinity server. The affinity server receives the requests and selects an advertisement from an ad database using one of several methods, including: sponsorship categories, ad inventory, and user profiling. When initiated by the affinity server, the user profiling module performs content stream analysis using demographic, geographic, psychographic, digital identification, and HTTP information. The affinity server then selects an advertisement, which is sent back to the web server, where it is associated with a new web page. Thereafter the new web page is sent to the user, who sees the advertisement displayed thereon. Clearly, as recited above, the teachings of Kurtzman II are not even remotely similar to the features of claim 1.

As discussed, the combination of Kadowaki and Kurtzman II does not disclose each and every feature of the claimed invention. In fact, each of these references addresses different

problems in very different fields. Because the applications of technology taught in each reference are so different, Applicants submit that there would be no reasonable expectation that an apparatus or method conceived by combining the teachings of all three references would operate at all. In other words there is no reasonable expectation of success. For example, it is difficult to imagine the printer controller of Kadowaki even functioning if programmed according to the content stream analysis teachings of Tetzlaff. But even if such a device did function, it still would not disclose at least the arbiter as claimed.

Furthermore, because the problems addressed by these references are so different, there would be no motivation for a person skilled in the art to combine the teachings of each reference. For example, a person skilled in the printer art attempting to solve problems therein would not be motivated to look to the content stream analysis art (Kurtzmann II) for possible solutions. Clearly, the combination of references makes sense only after reading Applicants' specification, which is impermissible hindsight. For these reasons, Applicants respectfully submit that claims 3, 5, 10, and 11 are allowable over Kadowaki and Kurtzman II, whether singly or in combination. Accordingly, Applicants respectfully request that the rejections of claims 3, 5, 10, and 11 be withdrawn.

#### **Claim 7**

Claim 7 depends from independent claim 1, and was rejected as being unpatentable over Kadowaki, in view of Jacobi, in view of Tetzlaff. The references Kadowaki and Tetzlaff have both been previously discussed with regards to claim 1 and each shown not to disclose the

features of claim 1. Moreover, their combination does not cure these deficiencies; and certainly does not teach or suggest each and every element of either claims 1 or 7.

The Examiner's position with respect to claim 7 is as follows:

(a) Kadowaki does not teach the method wherein the plurality of personalization engines comprises at least two personalization engines selected from the group consisting of a rule-based personalization engine, a predictive-modeling personalization, and a collaborative filtering personalization.

(b) Jacobi, at Column 2, lines 18-21 allegedly teaches a collaborative filtering engine.

(c) Tetzlaff, at Column 2, lines 22-27 teaches a feedback generator, which the Examiner interprets as a personalization engine because it allegedly uses rule-based protocol to give feedback to a user depending on a particular user model.

In traverse of these rejections, Applicants respectfully offer the following comments.

Regarding (b), Jacobi does generally disclose the use of collaborative filtering techniques. However, as Jacobi is directed to an electronic book recommendation service, it does not teach the arbiter or personalization engines as claimed by Applicants. Consequently, its combination with Kadowaki fails to cure Kadowaki's deficiencies.

Regarding (c), Applicants respectfully submit that the Examiner's interpretation of the feedback generator taught by Tetzlaff as the claimed personalization engine by Applicants does not appear to be correct. As previously noted, the personalization engine in Applicants' invention retrieves at least one personalized content object from a content database. In contrast, the feedback generator of Tetzlaff functions as a comparator to indicate whether a user's nutrient values for elements of given meal are or are not appropriate. For these reasons, Applicants respectfully submit that the feedback generator taught by Tetzlaff cannot be interpreted as the

personalization engine of the claimed invention. Consequently, its combination with Kadowaki and Jacobi fails to cure their deficiencies.

As discussed, the combination of Kadowaki, Jacobi, and Tetzlaff does not disclose each and every feature of the claimed invention. In fact, each of these references addresses different problems in very different fields. Because the applications of technology taught in each reference are so different, Applicants submit that there would be no reasonable expectation that an apparatus or method conceived by combining the teachings of all three references would operate at all. For example, it is difficult to imagine the printer controller of Kadowaki even functioning if programmed according to the food processor teachings of Tetzlaff or according to the book recommendation teachings of Jacobi. But even if such a device did function, it still would not disclose at least the arbiter as claimed by.

Furthermore, because the problems addressed by reference are so different, there would be no motivation for a person skilled in the art to combine the teachings of each reference. For example, a person skilled in the printer art attempting to solve problems therein would not be motivated to look to the food processor art (Tetzlaff) or to an online book recommendation service (Jacobi) for possible solutions. Clearly, the combination of references makes sense only after reading Applicant's specification, which is impermissible hindsight.

For these reasons, Applicants believe that the Examiner has failed to establish a *prima facie* case of obviousness over claims 3, 5, 7, 10 and 11. Claims 3, 5, 7, 10 and 11 are thus distinguishable over the references of record and are in allowable condition. Accordingly, Applicants respectfully request that the rejection over claims 3, 5, 7, 10 and 11 be withdrawn.

- 22 -

**CONCLUSION**

In view of the foregoing amendments and remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicants hereby make a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to IBM Deposit Account No. 09-0457.

Respectfully submitted,



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